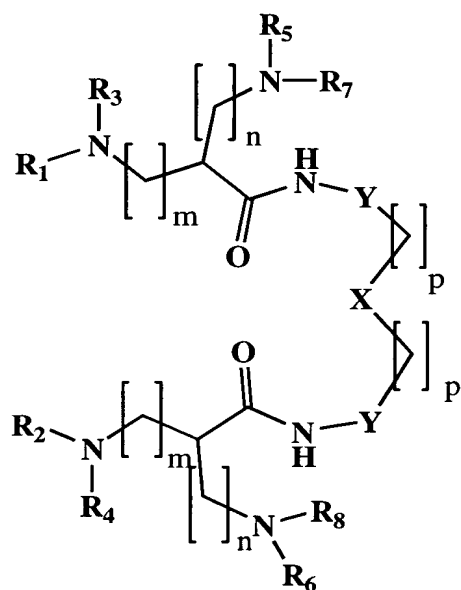


Amendments to the claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended): A diaminoacid-polyamine:peptide based gemini compound having a diaminoacid-polyamine or a diaminoacid-aminoacid-polyamine backbone and conforming to the general structure of formula (I):



(I)

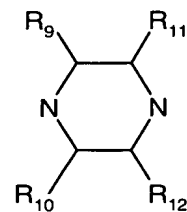
where:

m = 0 to 6;

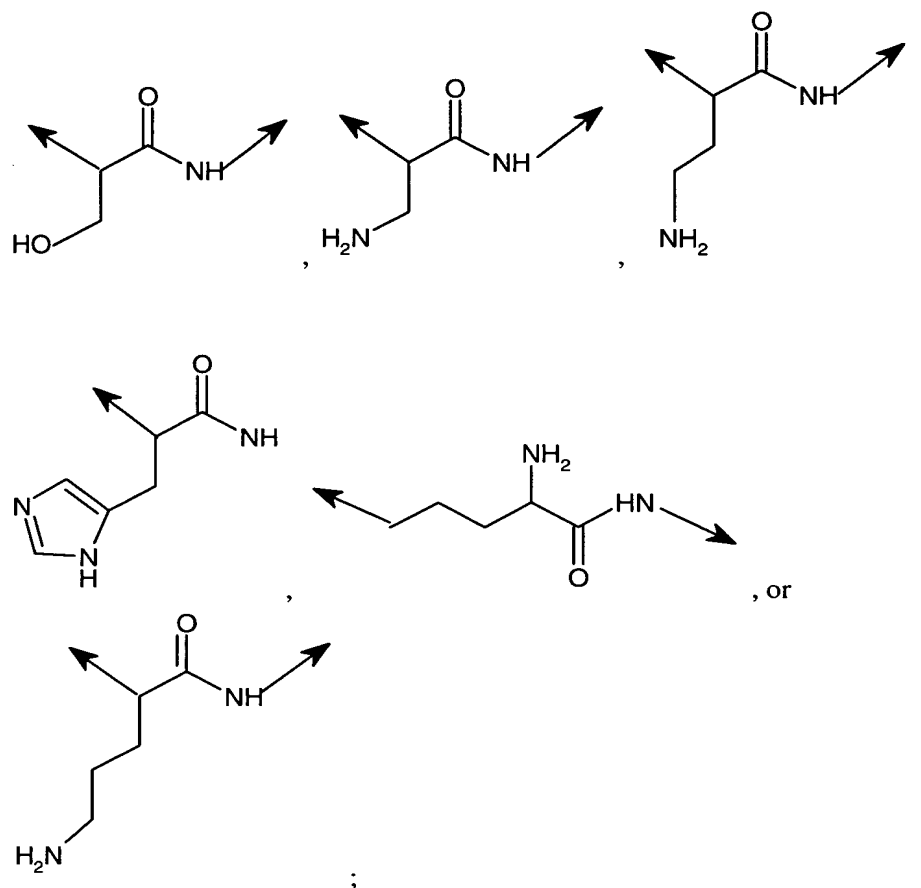
n = 0 to 7;

p = 0 to 6; and where

X = a bond, CH₂, (CH₂)₂, NH(CH₂)_qNH where q = 2 to 6, or



where R_9 to R_{12} , which can be the same or different, are selected from H, O or C_rH_{2r+1} , where $r = 0$ to 6 with the proviso that when R_9 and R_{12} are O, or when R_9 and R_{11} are O, then R_{10} and R_{11} or R_{10} and R_{12} , respectively, are H; and where Y = a bond, CH_2 ,



and where R_3 , R_4 , R_5 , R_6 , R_7 and R_8 are hydrogen and R_1 and R_2 are saturated or unsaturated hydrocarboxyl groups having up to 24 carbon atoms and linked to the diaminoacid-polyamine backbone by an amide bond;

or

where R_3 , R_4 , R_5 and R_6 are hydrogen, R_1 and R_2 are saturated or unsaturated hydrocarboxyl groups having up to 24 carbon atoms and linked to the diaminoacid-polyamine backbone by an amide bond, and where R_7 and R_8 , which may be the same or different, are peptide groups formed from one or more amino acids linked together by amide (CONH) bonds, and further linked to the diaminoacid-polyamine backbone by

amide bonds, in a linear or branched manner, wherein the peptide groups having are represented by the general formula (II):



where the values for p1 and p2, which may be the same or different, are from 0 1 to 5; ~~preferably 1~~;

and the values for p3 and p4, which may be the same or different, are from 0 to 5; ~~preferably 0~~;

A1, A3 and A4, which may be the same or different, is an amino acid selected from the group consisting of serine, lysine, ornithine, threonine, histidine, cysteine, arginine and tyrosine; and

A2 is an amino acid selected from the group consisting of lysine, ornithine and histidine; or

a pharmaceutically acceptable salt thereof.-

2. (Currently amended): A compound according to claim 1 wherein that is symmetrical, that is R₁ and R₂ are the same as each other, R₃ and R₄ are the same as each other, R₅ and R₆ are the same as each other, R₇ and R₈ are the same as each other.

3. (Currently amended): A compound according to ~~claims~~ claim 1 or 2 wherein A1 is lysine, serine or threonine, and A3 and A4 are lysine, ornithine, histidine or arginine.

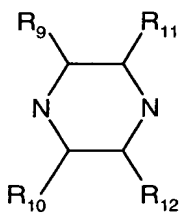
4. (Currently amended): A compound according to ~~any of claims 1 to 3~~ claim 1 wherein the hydrocarboxyl group is selected from the group consisting of:

$-\text{C}(\text{O})(\text{CH}_2)_{10}\text{CH}_3$
 $-\text{C}(\text{O})(\text{CH}_2)_{12}\text{CH}_3$
 $-\text{C}(\text{O})(\text{CH}_2)_{14}\text{CH}_3$
 $-\text{C}(\text{O})(\text{CH}_2)_{16}\text{CH}_3$
 $-\text{C}(\text{O})(\text{CH}_2)_{18}\text{CH}_3$
 $-\text{C}(\text{O})(\text{CH}_2)_{20}\text{CH}_3$
 $-\text{C}(\text{O})(\text{CH}_2)_7\text{CH}=\text{CH}(\text{CH}_2)_5\text{CH}_3$ natural mixture
 $-\text{C}(\text{O})(\text{CH}_2)_7\text{CH}=\text{CH}(\text{CH}_2)_7\text{CH}_3$ natural mixture
 $-\text{C}(\text{O})(\text{CH}_2)_7\text{CH}=\text{CH}(\text{CH}_2)_5\text{CH}_3$ Cis
 $-\text{C}(\text{O})(\text{CH}_2)_7\text{CH}=\text{CH}(\text{CH}_2)_7\text{CH}_3$ Cis
 $-\text{C}(\text{O})(\text{CH}_2)_7\text{CH}=\text{CH}(\text{CH}_2)_5\text{CH}_3$ Trans
 $-\text{C}(\text{O})(\text{CH}_2)_7\text{CH}=\text{CH}(\text{CH}_2)_7\text{CH}_3$ Trans
 $-\text{C}(\text{O})(\text{CH}_2)_7\text{CH}=\text{CHCH}_2\text{CH}=\text{CH}(\text{CH}_2)_4\text{CH}_3$
 $-\text{C}(\text{O})(\text{CH}_2)_7(\text{CH}=\text{CHCH}_2)_3\text{CH}_3$
 $-\text{C}(\text{O})(\text{CH}_2)_3\text{CH}=\text{CH}(\text{CH}_2\text{CH}=\text{CH})_3(\text{CH}_2)_4\text{CH}_3$
 $-\text{C}(\text{O})(\text{CH}_2)_7\text{CHCH}(\text{CH}_2)_7\text{CH}_3$
 $-\text{C}(\text{O})\text{CHCHOH}(\text{CH}_2)_2\text{CH}_3$ or and
 $-\text{C}(\text{O})(\text{CH}_2)_{22}\text{CH}_3$.

5. (Currently amended): A compound according to ~~any one of claims 1 to 4~~ claim 1 where m is 0, n is 2 to 4, X is (CH_2) or $(\text{CH}_2)_2$, Y is a bond and p is 0 to 4.

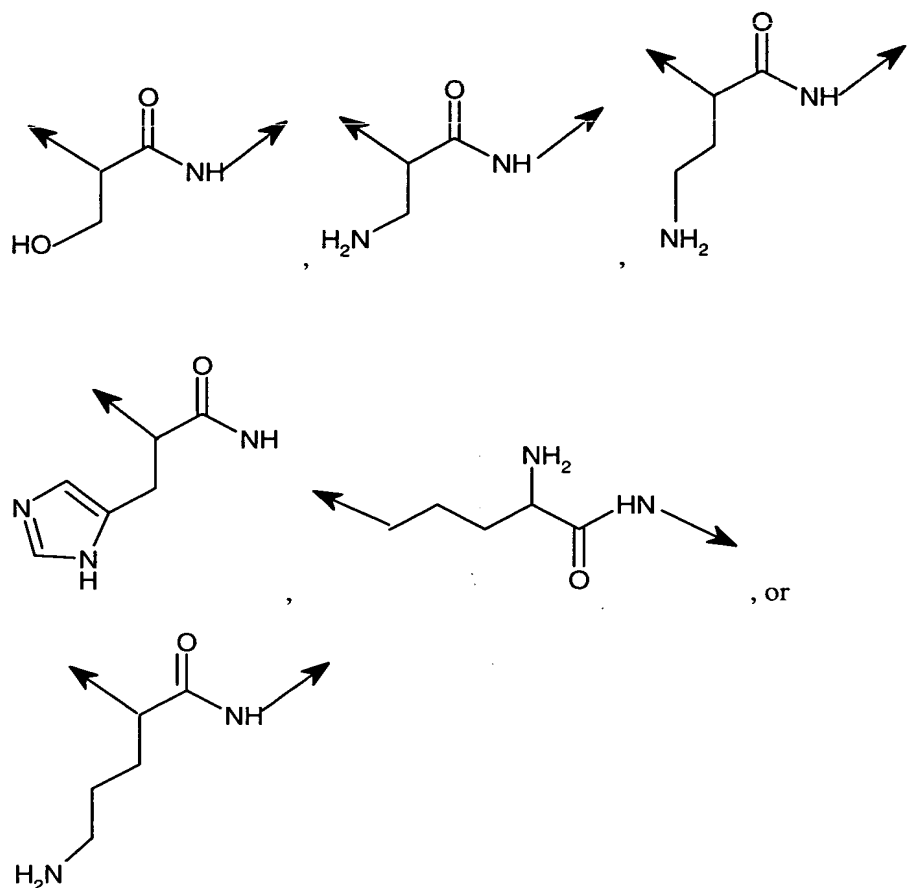
6. (Currently amended): A compound according to ~~any one of claims 1 to 4~~ claim 1 where m is 0, n is 2 to 4, X is $\text{NH}(\text{CH}_2)_q\text{NH}$, where q is 2 to 5, Y is a bond and p is 2 to 5.

7. (Currently amended): A compound according to ~~any one of claims 1 to 4~~

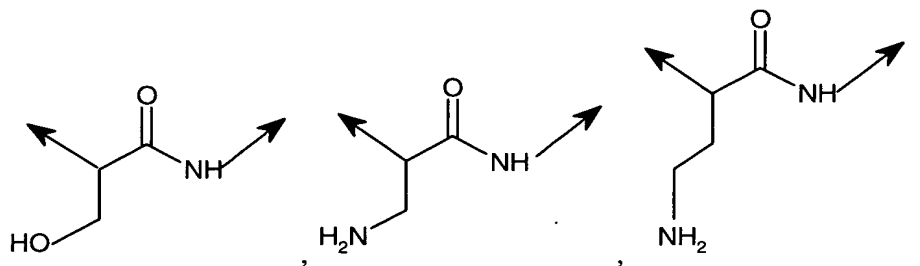


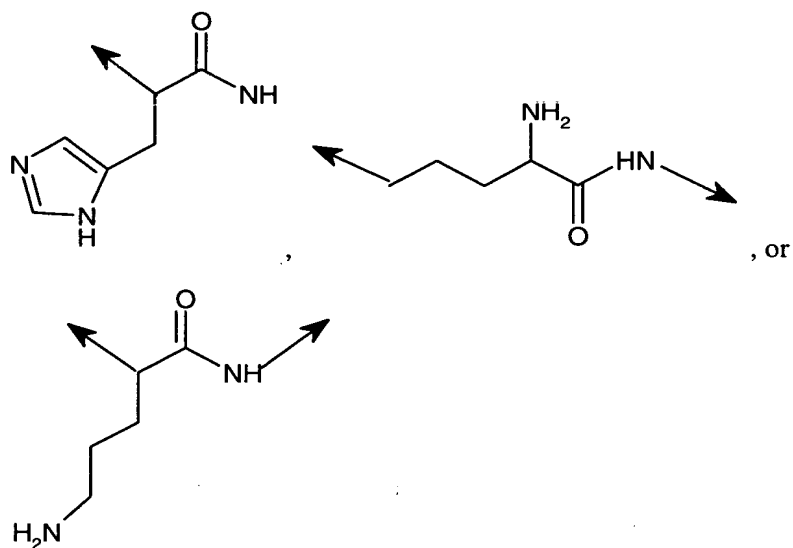
claim 1 where m is 0, n is 2 to 4, X is R_{10} , where $\text{R}_9, \text{R}_{10}, \text{R}_{11}$ and R_{12} are all H, Y is a bond and p is 2 to 5.

8. (Currently amended): A compound according to ~~any one of claims 1 to 4~~ claim 1 where m is 0, n is 2 to 4, X is (CH_2) or $(\text{CH}_2)_2$, p is 0 to 4 and Y is

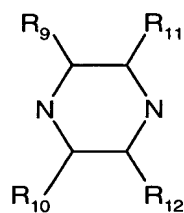


9. (Currently amended): A compound according to ~~any one of claims 1 to 4~~
claim 1 where m is 0, n is 2 to 4, X is $\text{NH}(\text{CH}_2)_q\text{NH}$, where q is 2 to 5, p is 2 to 5 and Y
 is

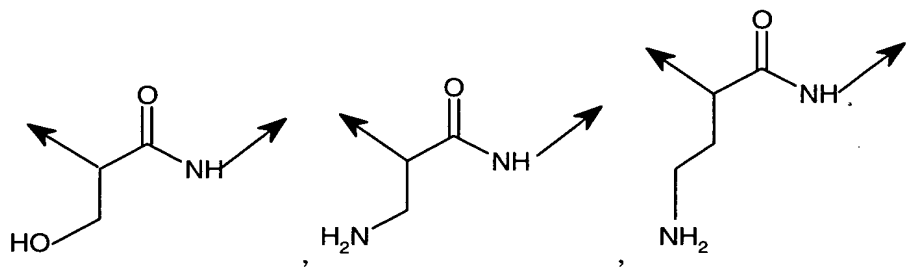


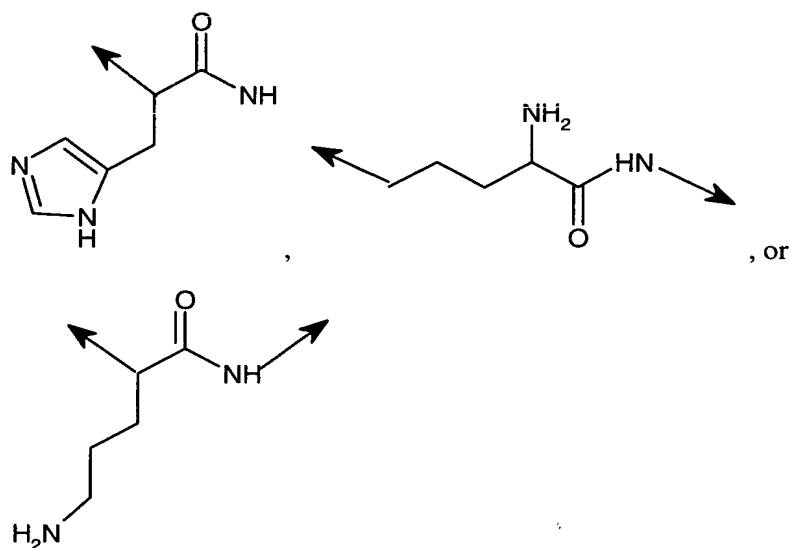


10. (Currently amended): A compound according to ~~any one of claims 1 to 4~~
claim 1 where m is 0, n is 2 to 4, X is

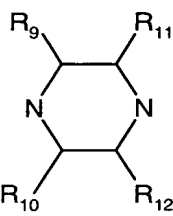


, where R_9 , R_{10} , R_{11} and R_{12} are all H, p is 2 to 5 and Y is



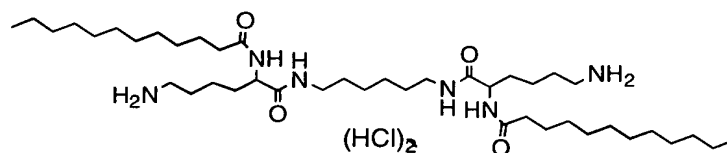


11. (Currently amended): A compound according to ~~any one of claims 1 to 4~~

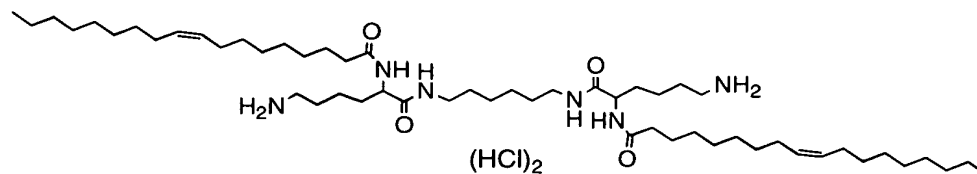


claim 1 where X is R_{10} , Y is a bond, p is 1 to 6 and n is 1 to 7.

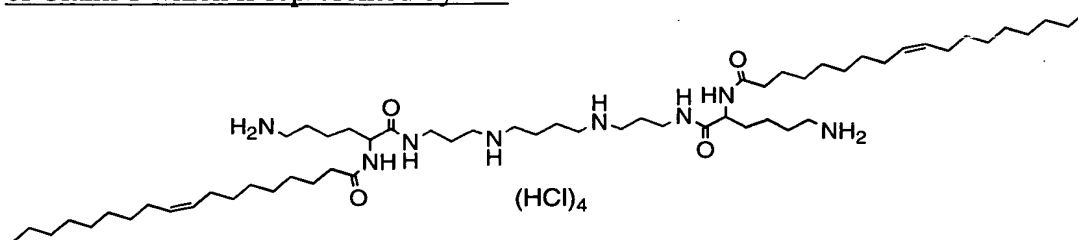
12. (Currently amended): ~~The compound GSN-11 of~~ A salt of the compound of Claim 1 which is represented by the formula:



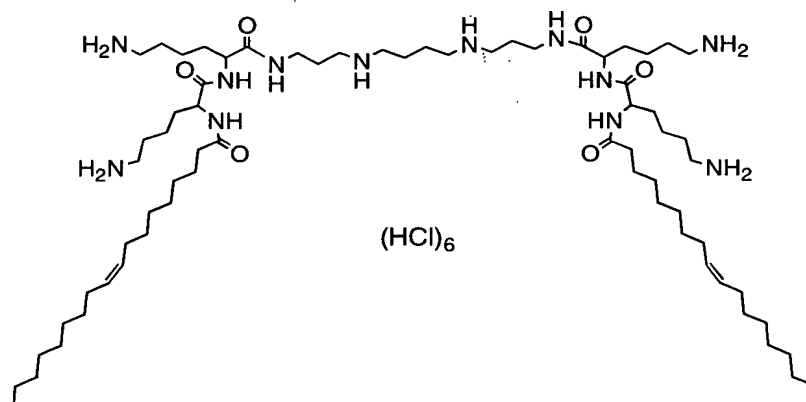
13. (Currently amended): ~~The compound GSN-14 of~~ A salt of the compound of Claim 1 which is represented by the formula:



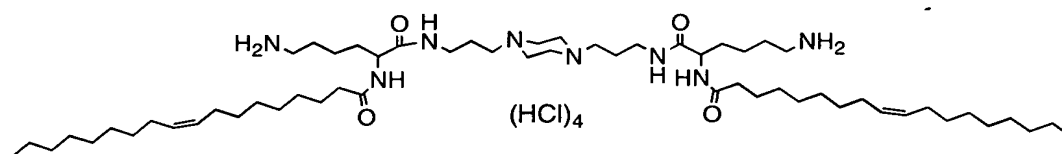
14. (Currently amended): ~~The compound GSC-102 of~~ A salt of the compound of Claim 1 which is represented by the formula:



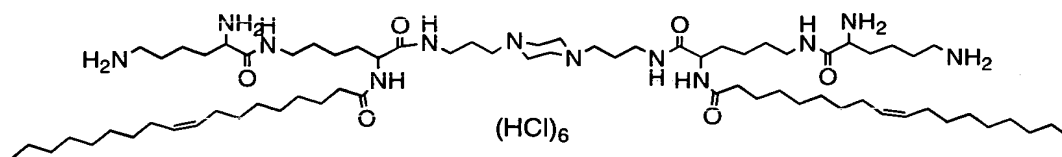
15. (Currently amended): ~~The compound GSC-157~~ A salt of the compound of Claim 1 which is represented by the formula:



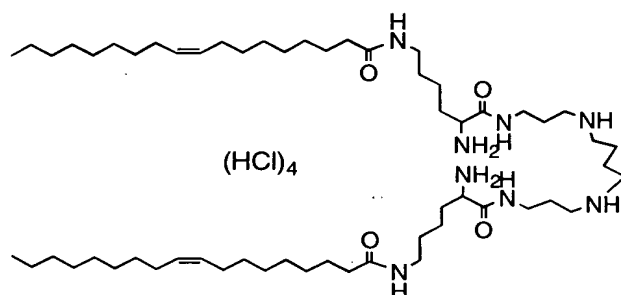
16. (Currently amended): ~~The compound GSC170 of~~ A salt of the compound of Claim 1 which is represented by the formula:



17. (Currently amended): ~~The compound GSC-184 of~~ A salt of the compound of Claim 1 which is represented by the formula:



18. (Currently amended): ~~The compound GSC101 of~~ A salt of the compound of Claim 1 which is represented by the formula:



19. (canceled):

20. (Currently amended): ~~The use method of a diaminoacid-polyamine-peptide-based gemini compound according to claim 19~~ 31 wherein the compound is used in combination with one or more supplements selected from the group consisting of further includes a supplement selected from the group consisting of:

- (i) a neutral carrier; or
- (ii) a complexing reagent.

21. (Currently amended): ~~The use method~~ according to claim 20 wherein the neutral carrier is dioleoyl phosphatidylethanolamine (DOPE).

22. (canceled):

23. (Currently amended): ~~The use method~~ according to claim 20 wherein the complexing reagent is a peptide comprising mainly basic amino acids.

24. (Currently amended): The ~~use~~ method according to claim 23 wherein the peptide consists of basic amino acids.

25. (Currently amended): The ~~use~~ method according to claim 23 ~~or 24~~ wherein the basic amino acids are selected from the group consisting of lysine, ornithine, and arginine.

26. (canceled):

27. (canceled):

28. (canceled):

29. (canceled):

30. (Original): A process for preparing diaminoacid-polyamine-based gemini compounds of claim 1 which process comprises the coupling of a succinimide ester of a diaminoacid linked to its α or terminal amino group to an hydrocarboxyl chain to a polyamine linker using potassium carbonate as a base in a mixture of tetrahydrofuran and water as solvents.

31. (new): A method of enabling transfection of DNA or RNA or analogs thereof comprising the step of administering an effective amount of a compound of Claim 1, or a pharmaceutically acceptable salt thereof, to a culture to facilitate transfer of the DNA or RNA or analogs thereof into a eukaryotic or prokaryotic cell.

32. (new): A method of facilitating transfer of a polynucleotide or anti-infective compound into a prokaryotic or eukaryotic organism comprising the step of administering an effective amount of a compound of Claim 1 or a pharmaceutically acceptable salt thereof to the organism to treat infection.